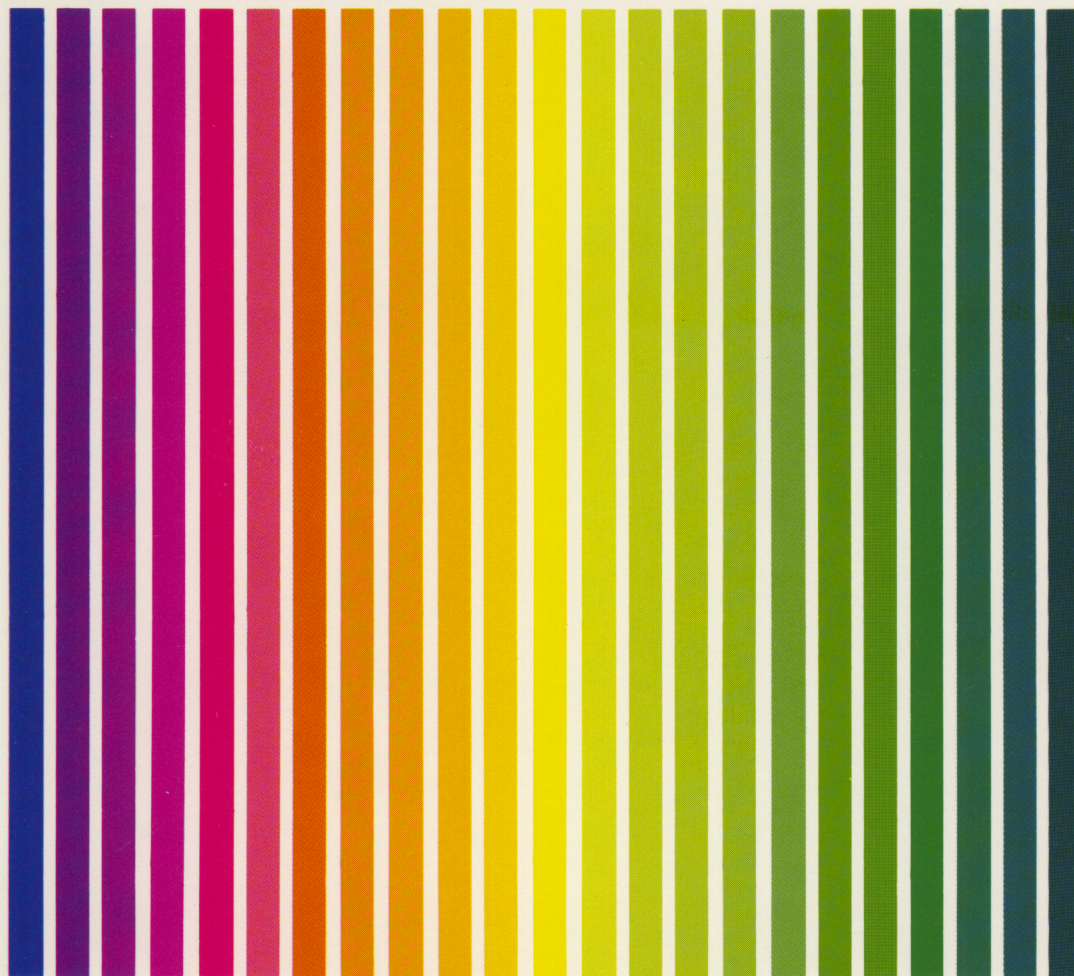# CPX

ATARI® PROGRAM EXCHANGE

Bob Polaro

LEMONADE

APX-10001 APX-20001

User-Written Software for ATARI Home Computers

Bob Polaro

LEMONADE

APX-10001 APX-20001

LEMONADE

by

Bob Polaro

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OVERVIEW

LEMONADE lets you experience running a small business. Your goal is to make as much money as possible. Each day you decide how many glasses of lemonade to produce, how many advertising signs to buy, and how much to charge per glass of lemonade. Of course, you have only as much money to spend as you earned in previous days of selling lemonade, after subtracting your costs for ingredients and signs. If you charge too high a price per glass and do little or no advertising, you'll find yourself headed for bankruptcy. Once you use up all your available money, called your assets, you've gone bankrupt and the game ends. However, you can always set up a new lemonade stand. Many a successful business owner has learned from earlier failures. If you don't go bankrupt, you can continue to increase your assets for as long as you like—the game doesn't limit your success!

You need to weigh your costs for making the lemonade (your production costs) and for buying signs (your advertising costs) against the number of glasses you think you can sell each day (your anticipated sales). When making your decisions, you must also consider how events like heat waves, inflation, and road construction can affect your anticipated sales. Sometimes events can help you make a greater profit, and sometimes they can cause you to lose sales. Like the real world, you don't see the effect of these events until after you've made your decisions. The results of your decisions each day affect how much money you have available the next day.

In this version of LEMONADE, you may make as many as 99 glasses of lemonade, and you may buy as many as 9 signs. You may charge as much as $ .99 per glass of lemonade. Set yourself a goal and see what it takes to reach it. Good luck!

REQUIRED ACCESSORIES

16K RAM
ATARI BASIC Language Cartridge
ATARI 410 Program Recorder for cassette version
ATARI 810 Disk Drive for diskette version

GETTING STARTED

1. Insert the ATARI BASIC Language Cartridge in the (Left Cartridge) slot of your computer.

2. If you have the cassette version of the game:

   a. Insert the game cassette in the program recorder, press REWIND, and then press PLAY.

   b. Type CLOAD and press RETURN twice.

   c. After the game loads into RAM, you'll see the READY prompt. Type RUN and press RETURN.

   If you have the diskette version of the game:

   a. Turn on your disk drive and insert the game diskette.

   b. Power up your computer and turn on your video screen.

c. At the READY prompt, type RUN "D:LEMONADE" and press the RETURN key. If you're using more than one disk drive, remember to follow the device initial (D) with the number of the drive containing the game diskette (e.g., RUN "D2:LEMONADE" for disk drive two). The program will load into RAM and start.

THE FIRST DISPLAY SCREEN

Following the COPYRIGHT 1981 ATARI notice, this information displays on your screen:

```
      ------------------------------
      |                            |
      |          LEMONADE          |
      |                            |
(1)   | DAY 1                  .   |
(2)   | ASSETS        = $2.00      |
(3)   | COST/GLASS    = .02        |
      |                            |
(4)   | NO. OF GLASSES  40         |
(5)   | SIGNS @ 13 CENTS  2        |
(6)   | PRICE/GLASS    20          |
(7)   | OKAY? (Y/N)                |
      |                      .     |
      ------------------------------
```

Figure 1.   FIRST DISPLAY SCREEN

The underscored numbers show where you enter your numbers to tell the computer how many glasses you want to make, how many signs you want to buy, and how much you want to charge per glass.

Line (1) shows the number of days you've been running you lemonade stand. When you start the game, this line says DAY 1. Line (2) tells you how much money you have to spend on ingredients and signs. You always begin the game with $2.00 in assets. You can spend as much or as little of this money as you like. Your assets are the amount of money your business is worth, after subtracting all your expenses. As each day goes by, this amount changes. The figure goes up if you make more money in sales than you spend to make lemonade and buy signs. It goes down if you spend more money than you earn in sales. Line (3) tells you the cost of making each glass of lemonade—how much you spend for lemon juice, sugar, and water. The game always starts with a cost of $ .02 per glass. But this cost can change from day to day, and so be sure to look at this information before making your decisions.

Entering your numbers

In the next three lines of Figure 1, you enter numbers. A flashing underscore indicates which line you're on, so that you'll know what information the computer wants you to enter.

NO. OF GLASSES
Line (4) asks you to enter the number of glasses you want to sell today. You may choose any whole number between 1 and 99. If you enter a one-digit number like 5, then press the RETURN key to go on to the next line. If you enter a two-digit number like 10, then the

flashing underscore moves automatically to the next line. In this example, we want to make 40 glasses.

SIGNS @ __ CENTS
> Line (5) asks you to enter the number of signs you want to buy at the cost indicated (in the example, the cost is $ .13). You may buy as many as 9 signs, but your signs are usable only on the day you buy them. In our example, we're buying 2 signs. The cost of signs can change, and so be sure to look at the cost before deciding how many signs you want to use.

PRICE/GLASS
> Line (6) asks you to enter the amount you want to charge per glass. Enter your number as cents. You may charge as much as $ .99 per glass. If you enter a one-digit number, press the RETURN key to go on to the OKAY? (Y/N) prompt. In the example, we're charging $ .20 per glass.

After you've entered these three numbers, you'll see line (7), which asks you whether you're satisfied with your decisions, or whether you want to change any of them. If you're satisfied, type Y for "yes". If you want to change something, type N for "no" and the computer will erase your three numbers and begin asking you for new numbers, starting at line (4).

RUNNING YOUR LEMONADE STAND—DAY 1

Once you enter your numbers for the first day and type Y to tell the computer you're ready to see the results, the computer adds new lines to the display shown above. These new lines repeat the information you entered and also show you how many glasses you sold, how much money you made, what your total expenses were, how much money you have left after you subtract your expenses from what you made, and how much money your lemonade stand is now worth! The display looks like this:

```
 -------------------------------------
|                                     |
|             LEMONADE                |
|                                     |
| DAY 1                               |
| ASSETS          = $2.00            |
| COST/GLASS      = .02              |
|                                     |
| NO. OF GLASSES   40                |
| SIGNS @ 13 CENTS  2                |
| PRICE/GLASS      20                |
| OKAY? (Y/N)                         |
|                                     |
| ****************************        |
|                                     |
(1) | SIGNS    2                      |
(2) | MADE    40                      |
(3) | SOLD    37                      |
(4) | PRICE  0.20                     |
(5) | INCOME    7.40                  |
(6) | EXPENSES 1.06                   |
(7) | PROFIT   6.34                   |
(8) | ASSETS   8.34                   |
|                                     |
 -------------------------------------
```

Figure 2.   FULL DISPLAY SCREEN

SIGNS in line (1) repeats the number of signs you requested. In our example, we requested 2 signs.

MADE in line (2) repeats the number of glasses you made. In our example, we said we wanted to make 40 glasses.

SOLD in line (3) tells you how many of these glasses you sold. In this case, we sold 37 of the 40 glasses prepared (not bad!). When you don't sell everything you make, you can't save the leftovers for the next day. Each day you start with a fresh supply. (So you might as well drink whatever is leftover each day yourself!)

PRICE in line (4) repeats the price you set per glass. In our example, we said we wanted to charge $ .20 per glass.

INCOME in line (5) tells you how much money you took in from customers. This amount is the number of glasses sold multiplied by the price you charged per glass. In our example, we sold 37 glasses and charged $ .20 per glass; 37 x .20 is 7.40, so our INCOME is $7.40.

EXPENSES in line (6) shows us the total cost of making the lemonade and buying the signs. This amount is the sum of two products. The first product is the number of glasses of lemonade we made multiplied by the cost of ingredients per glass. In our example, we made 40 glasses, each one costing us $ .02, and so our production cost was 40 x .02, or $ .80. The second product is the number of signs multiplied by the cost per sign. In our example, we bought 2 signs, each costing $ .13, and so our advertising costs were 2 x .13, or $ .26. If we add our production cost ($ .80) to our advertising costs ($.26), we have our total expenses ($1.06).

PROFIT in line (7) shows us how much money we have left after we subtract all our expenses from our income. In our example, our income was $7.40 our expenses were $1.06, and so our profit is $7.40 – $1.06, or $6.34.

Finally, ASSETS in line (8) tells us how much money our lemonade stand is now worth! This amount equals the assets we started the day with, plus our profit for today. In our example, we started the day with $2.00, and our profit was $6.34. Therefore, our assets now amount to $2.00 + $6.34, or $8.34!

RUNNING YOUR LEMONADE STAND AFTER THE FIRST DAY

After you enter your numbers for the first day and study the results, you'll also see that at the top of the display, the DAY has now changed to DAY 2, your ASSETS now show your new worth, and the COST/GLASS may or may not be the same as on the previous day. The flashing underscore will position itself on the first line of information requested (NO. OF GLASSES), and you now need to make your business decisions for DAY 2. Each time you enter your numbers, the information below the line of asterisks (*) changes to reflect the results of your decisions. Look at these results, note your new assets and the cost per glass of lemonade, and then make your decisions.

What happens when you charge a lot of money for a glass and when you charge very little? What happens when you don't use any advertising signs at all? What happens when you use the maximum allowed? Do you usually sell all your lemonade when you make a lot? Do you sell it all when you make just a few glasses?

RAIN, ROAD CONSTRUCTION, AND OTHER EVENTS

Sometimes you'll see an "event" displayed beneath the top three lines of the screen display. For example, you might face a heat wave on one day and the chance of rain on another, or workers might be doing some roadwork nearby. And just like real life, sometimes you must cope with inflation! Whenever you see an event displayed, consider how it might affect your sales. For example, would a chance of rain prevent some people from passing by and buying your lemonade? Would a heat wave make people especially thirsty and therefore more eager to buy your lemonade? Would the road workers be especially likely to buy your lemonade because they work hard?

RESTARTING LEMONADE

You can restart LEMONADE from DAY 1 at any time by pressing the START key.

ERROR MESSAGE

If you try to spend more money than you have in assets, the message

NOT ENOUGH ASSETS

displays near the top of your screen and a warning buzzer sounds. The flashing cursor repositions on the same line and you must revise the number you entered.

TEACHER'S GUIDE

Students are consumers. They should be well-informed about elementary business concepts to make intelligent decisions in a free market economy. LEMONADE provides insight into questions like these. How does a business set a price for its product? Why did the cost of a candy bar just increase again? Why do we have commercials on television and ads in magazines?

One way to understand the issues involved is by experiencing what it's like to run a business. LEMONADE lets students become owners of a small business in a simplified environment. However, even in this controlled environment, lemonade stand owners still face random, unexpected events typical of real life. This simulation is suitable for children in the fourth grade and above. The simulation lets students focus on one idea at a time if they choose (e.g., trying to run their stand with no advertising, minimal advertising, maximal advertising while holding the price and quantity constant) and it gives them the chance to try different methods for running their business. In addition, the random events help them to learn how to analyze the potential impact on their business of uncontrollable factors in their environment.

The game can apply to a number of subject areas. Below are a couple of areas. You can no doubt enlarge on these suggestions.

MATHEMATICS

LEMONADE can help students practice the basic arithmetic used in even a simple business decision. After a student or group of students enters the numbers for a business day, announce how many glasses were sold. Then let them calculate their expenses, income, profit, and assets, and let them compare their figures with the figures in the display.

As another exercise, students can create a table like the one below to allow them to analyze the different trials to find the best combinations. ("Event" refers to an unexpected, random occurrence displayed, like road construction or inflation.)

DAY _____

INPUT
        Glasses made _____   Signs made _____   Price per glass _____

OUTPUT

Glasses Made	Signs	Price	Event	Glasses Sold	Income	Expenses	Profit Today	Assets

SOCIAL STUDIES

LEMONADE can serve as a takeoff point for discussing several aspects of economics—from vocabulary building to understanding basic issues facing small business owners.

Vocabulary building

Ask students to explain these words used in LEMONADE:

advertising
price
expenses
profit
income
assets
inflation
bankruptcy

Discussion topics—preliminary

Use these questions and statements to stimulate discussions about operating a small business.

1. List some ways you could use to advertise a lemonade stand if you actually had one.

2. What types of expenses do you think you might have in running a lemonade stand?

3. If you set the price of your lemonade at 5 cents per glass and you sell 25 glasses, how much money do you receive?

4. If you had a daily profit of -$ .50, did you make money or lose money on that day?

5. If you sell 30 glasses of lemonade at 6 cents each and have expenses of $1.20, what is your profit for that day?

7. In managing a lemonade stand, it is better to make a lot of lemonade and have some left over or make a little and sell all you have? Why?

8. Is it better to charge a low price and sell a lot of lemonade or better to charge a high price and sell less lemonade? Why?

Discussion topics—after playing LEMONADE

These questions can stimulate discussions about business practices once students have played LEMONADE.

If you were really to go out and make a lemonade stand to sell lemonade for yourself:

1. What price would you ask for your lemonade?

2. Would you make any advertising signs to put up around the neighborhood?

3. Would you make the same amount of lemonade each day regardless of the weather? Why?

4. What other ways could you advertise your lemonade stand?

5. How could you cut down on your expenses so it wouldn't cost you as much to make your lemonade?

6. Would you rather have a lemonade stand by yourself so you did all the work and made all the money or would you rather be part of a group to help you with the work and share the money? Why?

7. What do you think would happen if another lemonade stand opened up across your street selling lemonade for 2 cents less per glass than you do?

8. What would you do to change your business if that lemonade stand kept cutting its price to stay below you?

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1. Name and APX number of program _____

2. If you have problems using the program, please describe them here.

_____

_____

_____

3. What do you especially like about this program?

_____

_____

_____

4. What do you think the program's weaknesses are?

_____

_____

_____

5. How can the catalog description be more accurate and/or comprehensive?

_____

_____

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program?

_____ Easy to use
_____ User-oriented (e.g., menus, prompts, clear language)
_____ Enjoyable
_____ Self-instructive
_____ Useful (non-game software)
_____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

_____

_____

_____

8. What did you especially like about the user instructions?

_____

_____

_____

9. What revisions or additions would improve these instructions?

_____

_____

_____

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

_____

_____

11. Other comments about the software or user instructions:

_____

_____

_____

_____

_____

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